College of Veterinary Science and Animal Husbandry
Kamdhenu University, Bhuj (Kutch)

DEPARTMENT OF VETERINARY PARASITOLOGY

About Department

The department was started very recently with a vision to develop the department of veterinary parasitology as per MSVE 2016. The initial priority is to establish the minimum standard of UG teaching with respect to infrastructure facilities and laboratory instruments. The presently department is functioning under the principal office. Looking to biodiversity of Kutch region with respect to various animal population, the department will start the digital documentation of parasitic prevalence of livestock of the Kutch region and conduct the epidemiological study of various parasitic diseases in the Kutch region. The department will work towards educating farmer's community of Kutch region regarding prevention measures to protect their livestock against parasitic diseases. In future advanced diagnostic facilities will also available for the livestock stakeholders.

Faculty Details

Name:	**Dr. Pandya Suchitkumar Sharadkumar**
Designation:	Assistant Professor & Head
Qualification:	Ph.D.
Experience:	07 Years
PG Students Guided	---
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Post-graduate Students Guided

Sr. No.	Thesis Title	Major Advisor	Year of Submission
-	-	-	-

Summary of Publications

Sr. No.	Detail	Numbers
1.	Research Paper (National Journal)	15
2.	Research Paper (International Journal)	14
3.	Short Communications	--
4.	Recommendations	05
5.	Book/ Booklets	04
6.	Chapters in Books	03
7.	Training Manual / Practical Manual	03
8.	Technical Bulletins	--
9.	Review articles in scientific journals	01
10.	Popular articles in vernacular languages	07
11.	Informative leaflets / folders for farmers	04

Awards

Sr. No.	Details	Number of Awards
1.	National	-
2.	International	-
3.	Scientific Society/Body/Agency Awards for best paper presentation	01
4.	Scientific Society Awards for best poster presentation	-
5.	Best article award	-
6.	Best Thesis Award	-
7.	Best Teachers award	-
8.	Others	-

Details of Awards

Sr. No.	Name of Award	Name of Awardee	Year	Instituted by
1.	Young Scientist Award	Dr. S.S. Pandya	2016	SVSBT

Achievements

1.	Dr. S.S. Pandya nominated as revewer of Approaches in Poultry, Dairy and Veterinary Science Journal (2017)
2.	Dr. S.S. Pandya nominated as Editorial Board Member of Multidisciplinary Journal of Science under Knowledge Consortium of Gujarat (KCG) a Govt.of Gujarat Initiative (2017).
3.	Dr. S.S. Pandya acted as Committee Member in Technical and Concluding Session organizing of seminar entitled as “Fertility Management in Bovines during 20-21 Sept. 2018
4.	Dr. S.S. Pandya acted as team member in “Animal Health Checkup cum clinical camp at Chotaudepur in collaboration with Shroff’s Foundation during 23rd-24th Feb. 2019
5.	Dr. S.S. Pandya acted as expert committee member for the selection of Veterinary Officers at Sri Sayajibaug Zoo, Vadodara Municipal Corporation.
6.	Dr. S.S. Pandya worked as In charge of Cattle Nuisance Control Department (CNCD) under Market Superintendent and under supervision of Commissioner of Vadodara Municipal Corporation.

UG Academics

UG Course (As per VCI MSVE 2016 course curriculum)

Sr. No.	Course offered in Third Professional Year	Credit Hours
1.	Veterinary Parasitology	3+2=5

UG Syllabus – Third Professional year

Theory

Unit	Contents
Unit 1	**GENERAL VETERINARY PARASITOLOGY** Parasitology: Introduction, Important historical landmarks, importance of parasitology in veterinary curriculum. Types of parasites (ecto, endo, hyper, obligatory, facultative, stenoxenous, euryxenous, monoxenous, heteroxenous, histozoic, coelozoic, temporary, permanent, pseudo, aberrant, incidental, opportunistic, zoonotic, protelean etc.). Types of hosts (definitive,

	intermediate, reservoir, paratenic, natural, unnatural, etc.) and vectors. Types of animal associations (symbiosis, phoresy, commensalism, parasitism, mutualism and predatorism). Modes of transmission of parasites and methods of dissemination of the infective stages of the parasites. International Code of Zoological Nomenclature: Rules and regulations, Standard Nomenclature of Animal Parasitic Diseases (SNOAPAD). Immunity against parasitic infectionsorinfestations, natural and acquired immunity, premunity, sterile immunity, autoimmunity, passive immunity, concomitant immunity and immune evasion by parasites. General harmful effects of parasites including various tissue reactions caused by parasites. General control measures against parasites. Characters of various phyla of parasites.
Unit 2	**TREMATODES AND CESTODES OF VETERINARY IMPORTANCE** Trematodes: Introduction, general account and classification, general life cycle of trematodes with morphological features of their developmental stages. Important morphological features, life cycles, modes of transmission, pathogenesis, epidemiology, diagnosis and general control measures (including chemo- and immuno-prophylaxis) of the following trematode parasites: Liver flukes (Fasciola, Dicrocoelium and Opisthorchis), intestinal flukes (Fasciolopsis). Blood flukes causing nasal schistosomosis (Schistosoma nasalis), visceral schistosomosis (S. spindale, S. indicum, S. incognitum) and cercarial dermatitis. Paramphistomes (Paramphistomum, Cotylophoron, Calicophoron, Gigantocotyle, Gastrothylax, Fischoederius,Carmyerius, Gastrodiscus, Gastrodiscoides and Pseudodiscus). Paragonimus, Prosthogonimus and Echinostomes. Cestodes: Introduction, general account and classification, general life cycle of cestodes with morphological features of their developmental stages (Metacestodes). Important morphological features, life cycles, modes of transmission, pathogenesis, epidemiology, diagnosis and management of the following cestode parasites: Equine tape worms (Anoplocephala, Paranoplocephala) and ruminant tape worms (Moniezia, Avitellina, Stilesia,Thysaniezia). Dog tape worms (Dipylidium, Taenia, Echinococcus). Poultry tape worms (Davainea, Cotugnia, Raillietina, Amoebotaenia, Choanotaenia and Hymenolepis. Broad fish tapeworm (Diphyllobothrium) and Spirometra.
Unit 3	**NEMATODES OF VETERINARY IMPORTANCE** Nematodes: Introduction, general account and classification, general life cycle of nematodes with morphological features of their developmental stages. Important morphological features, life cycles, modes of transmission, pathogenesis, epidemiology, diagnosis and management of the following nematode parasites: *Ascaris, Parascaris, Toxocara, Toxascaris, Ascaridia, Heterakis and Oxyuris. Strongyloides, Strongylus, Chabertia, Syngamus and Oesophagostomum. Kidney worms (Stephanurus and Dioctophyma), hook worms (Ancylostoma and Bunostomum). Trichostrongylus, Ostertagia, Cooperia, Nematodirus, Haemonchus and Mecistocirrus. Habronema, Draschia, Thelazia, Spirocerca, Gongylonema, Physaloptera and Gnathostoma. Dirofilaria, Parafilaria, Onchocerca, Setaria and Stephanofilaria. Lung worms (Dictyocaulus, Muellerius, Protostrongylus and Metastrongylus). Guinea worm (Dracunculus), Trichinella, Trichuris, Capillaria. Acanthocephala (Macracanthorhynchus)*. Study of anthelmintic resistance and its types.
Unit 4	**ARTHROPODS OF VETERINARY IMPORTANCE** Arthropods: Introduction, general account and classification, general life cycle of arthropods with morphological features of their developmental stages. Important morphological features, general bionomics, life cycle, vector potentiality, pathogenesis and control of following arthropods affecting animals and birds: *Bugs (Cimex). Biting midges (Culicoides), black flies (Simulium), sandflies (Phlebotomus), mosquitoes (Culex, Anopheles and Aedes). Horse flies (Tabanus), Haematopota and Chrysops. Musca, Stomoxys, Haematobia and Sarcophaga. Warbles (Hypoderma), stomach bots (Gasterophilus,Cobboldia), nasal bots (Oestrus ovis,Cephalopina), Bottle flies (Calliphora, Lucilia, Chrysomya), myiasis. Hippobosca, Melophagus, Pseudolynchia. Lice (Haematopinus, Linognathus, Trichodectes, Damalinia, Menopon, Lipeurus, Menacanthus and Heterodoxus). Fleas (Ctenocephalides, Echidnophaga, Xenopsylla, Pulex). Arachnids : General account, soft ticks (Argas, Ornithodoros and Otobius). Hard ticks (Hyalomma, Haemaphysalis, Rhipicephalus (Boophilus), Dermacentor, Ixodes and Amblyomma). Mites (Dermanyssus, Ornithonyssus, Demodex, Notoedres, Sarcoptes, Psoroptes, Chorioptes,*

	Cnemidocoptes and Otodectes). Pentasomida (Linguatula). Study of insecticideoracaricide resistance.
Unit 5	**PROTOZOA OF VETERINARY IMPORTANCE** Introduction, general account and classification, general life cycle of protozoa with morphological features of their developmental stages. Differentiation from bacteria and rickettsia. Important morphological features, life cycles, modes of transmission, pathogenesis, epidemiology, diagnosis and general control measures (including chemo- and immunoprophylaxis) of the following protozoan parasites of veterinary and zoonotic importance : *Leishmania (Visceral and cutaneous leishmanosis), Trypanosoma (T. evansi, T. theileri, T. equiperdum). Trichomonas (Bovine and avian trichomonosis). Histomonas (Black head in turkeys). Entamoeba, Giardia and Balantidium spp, Coccidia and coccidiosis of poultry and domestic animals. Cyst forming coccidia (Toxoplasma, Sarcocystis and Neospora caninum) and Cryptosporidium. Malarial parasites of animals and poultry (Plasmodium, Haemoproteus and Leucocytozoon). Piroplasms (Babesia, Theileria) and Hepatozoon. Anaplasma and Ehrlichia*. Resistance to antiprotozoals.

Practical

Unit	Contents
Unit 1	**GENERAL VETERINARY PARASITOLOGY** Demonstration of the types of final and intermediate hosts. Demonstration of different organsortissues of the hosts affected with endo-and ectoparasites. Visit to Post Mortem Hall to acquaint with different organs of animals affected with parasites. Demonstration of specific parasitic lesions caused by endo- and ectoparasites. Faecal examination techniques, egg counts, examination of faecal samples for the trematode, cestode, nematode eggs and protozoan cystsoroocystsortrophozoites. Demonstration of faecal culturing techniques. Methods of collection, fixation, preservation, staining and mounting of various types of parasites. Blood smear preparation: Wet, thin and thick smears. Staining of blood smears for demonstration of microfilariae and haemoprotozoan parasites. Collection and examination of skin scrapings for mites. Examination of urine samples and nasal washings for parasitic findings.
Unit 2	**TREMATODES AND CESTODES OF VETERINARY IMPORTANCE** Study of morphological characters of adults and developmental stages of the following trematodes and cestodes: *Fasciola, Fasciolopsis, Dicrocoelium, Opisthorchis, Paramphistomes (Paramphistomum, Schistosoma, Paragonimus, Prosthogonimus, Echinostomes, Cotylophoron, Gigantocotyle, Gastrothylax, Fischoederius, Gastrodiscus, Gastrodiscoides and Pseudodiscus). Anoplocephala, Paranoplocephala, Moniezia, Avitellina, Stilesia, Davainea, Cotugnia, Raillietina, Amoebotaenia, Choanotaenia, Hymenolepis, Dipylidium, Taenia, Echinococcus, Diphyllobothrium and Spirometra*. Demonstration of gross and microscopic lesions of parasites.
Unit 3	**NEMATODES OF VETERINARY IMPORTANCE** Study of morphological characters of adults and developmental stages of the following nematodes : *Ascaris, Parascaris, Toxocara, Toxascaris, Ascaridia, Heterakis, Oxyuris, Strongyloides, Strongylus, Chabertia, Syngamus and Oesophagostomum. Stephanurus, Dioctophyma, Ancylostoma, Bunostomum, Ostertagia, Trichostrongylus, Cooperia, Nematodirus, Haemonchus and Mecistocirrus. Habronema, Draschia, Thelazia, Spirocerca, Gongylonema, Physaloptera, Gnathostoma, Dirofilaria, Parafilaria, Onchocerca, Setaria, Stephanofilaria, Dictyocaulus, Muellerius, Protostrongylus, Metastrongylus, Dracunculus, Trichinella, Trichuris, Capillaria and Macracanthorhynchus.* Demonstration of gross and microscopic lesions of parasites.
Unit 4	**ARTHROPODS OF VETERINARY IMPORTANCE** Study of morphological characters of adults and life cycle stages of the following arthropods : *Culicoides, Simulium, Phlebotomus, Cimex, Culex, Anopheles, Aedes, Tabanus, Haematopota and Chrysops Musca, Stomoxys, Haematobia, Gasterophilus, Hypoderma, Oestrus ovis, bottle flies, Sarchophaga, Hippobosca, Melophagus and Pseudolynchia. Trichodectes, Menopon, Menacanthus, Lipeurus, Haematopinus, Linognathus and Damalinia Xenopsylla, Ctenocephalides and Echidnophaga.Argas, Ornithodoros, Otobius, Ixodes , Hyalomma, Rhipicephalus (Boophilus), Haemaphysalis, Dermacentor and Amblyomma. Dermanyssus,*

	Ornithonyssus, Demodex, Notoedres, Sarcoptes, Psoroptes, Chorioptes, Cnemidocoptes, Otodectes and Pentastomida. Demonstration of gross and microscopic lesions of parasites.
Unit 5	**PROTOZOA OF VETERINARY IMPORTANCE** Study of morphological characters of different stages of following protozoan parasites: *Leishmania, Trypanosoma, Trichomonas, Histomonas, Entamoeba, Balantidium, Giardia, Eimeria, Isospora, Sarcocystis , Toxoplasma and Cryptosporidium. Plasmodium, Haemoproteus and Leucocytozoon. Babesia, Theileria and Hepatozoon, Rickettsial organism Anaplasma and Ehrlichia*. Demonstration of formol ether and Ziehl-Neelson's staining techniques and other faecal examination techniques. Diagnosis of intestinal protozoan infections by iodine and eosin stain methods. Demonstration of gross and microscopic lesions due to protozoan parasites. Demonstration of Haemoproteus columbae in the blood. Demonstration of sporulation for diagnosis of coccidian parasites.

Syllabus Distribution for Annual Board Examination:

Examination	PAPERS	UNITS	MAXIMUM MARKS	WEIGHTAGE
Internal Assessment	First Second Third	30 % (Unit 1 and 2) 60 % (Unit 3 and 4) 90 % (Unit 5 and 6)	40 40 40	10 10 10
Annual Board	**THEORY**			
	Paper-I Paper-II	Unit 1,2,3 and 4 Unit 5 and 6	100 100	20 20
	PRACTICAL			
	Paper-I Paper – II	Unit 1 and 2 Unit 3, 4 and 5	60 60	20 20

PG Academics

Summary of PG students:

Sr. No.	Details	No. of Students passed out	No. of Students presently enrolled
1.	Master	-	-
2.	Doctorate	-	-
	Total	-	-

To be started in next academic year (2026-27)

PG Courses

Sr. No.	Course Code	Title of Course	Credit Hours
1.	VPA-501	Platyhelminthes – I	1 + 1
2.	VPA-502	Platyhelminthes – II	1 + 1
3.	VPA-503	Nematyhelminthes and Acanthocephala	2 + 1
4.	VPA-504	Arthropod Parasites	2 + 1
5.	VPA-505	Parasitic Protozoa	2 + 1
6.	VPA-506	Diagnostic Parasitology	0 + 2
7.	VPA-507	Clinical Parasitology	1 + 1
8.	VPA-508	Management of Parasitic Diseases	1 + 1
9.	VPA-509	Immunoparasitology	2 + 1

10.	VPA-510	Parasitic Zoonoses	2 + 0
11.	VPA-511	Parasites of Wildlife	1 + 1
12.	VPA-591	Master's seminar	1 + 0
13.	VPA-599	Master's research	30

Ph.D. Courses

Sr. No.	Course Code	Title of Course	Credit Hours
1.	VPA-601	Advances In Helminthology – I	2 + 1
2.	VPA-602	Advances In Helminthology – II	2 + 1
3.	VPA-603	Advances in Entomology and Acarology	2 + 1
4.	VPA-604	Advances in Protozoology	2 + 1
5.	VPA-605	Immunology of Parasitic Diseases	1 + 2
6.	VPA-606	Molecular Diagnostics and Vaccine Development in Parasitology	2 + 1
7.	VPA-607	Host Parasite Interactions	2 + 0
8.	VPA-608	*In-vitro* cultivation of parasites	1 + 2
9.	VPA-609	Emerging and Re-emerging Parasitic Diseases	2 + 0
10.	VPA-610	Biology and Ecology of Parasites	3 + 0
11.	VPA-611	Molecular Veterinary Parasitology	2 + 0
12.	VPA-612	Parasite Epidemiology	2 + 0
13.	VPA-691	Doctoral Seminar I	1 + 0
14.	VPA-692	Doctoral Seminar II	1 + 0
15.	VPA-699	Doctoral research	75

PG Examination Patterns

Sr. No.	Examination	Theory	Practical
1.	Self-study (Assignment/ Presentation)	20	-
2.	Internal tests:- First Test Mid Term Test	 10 20	 - 50
3.	Semester End Examination	50	50

Research Area of the Department

- Prevalence of various helminthic infection
- Prevalence of various arthropodes infection
- Studies on climate change on prevalence of various parasitic infections.
- Studies on prevalence, haemato biochemical alterations of various protozoan diseases.
- Studies on diagnostic aspects of various protozoan diasese using advanced molecular tools.

Contact details

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